

Before the
Federal Communications Commission
Washington, D.C. 20554

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Federal Communications Commission
Office of Secretary

In the Matter of)
)
Implementation of Section 304 of the) CS Docket No. 97-80
Telecommunications Act of 1996)
)
Commercial Availability of)
Navigation Devices)

Comments of the Telecommunications Industry Association

The Telecommunications Industry Association (TIA) is a national trade association whose membership includes over 625 manufacturers and suppliers of all types of telecommunications equipment and related products and services. TIA's members collectively provide the bulk of the physical plant and associated equipment and software used to support and improve the nation's telecommunications infrastructure. In addition, TIA is accredited by the American National Standards Institute (ANSI) to issue American National Standards for the industry.

I. Summary

The Telecommunications Industry Association supports competitive and retail availability of navigation devices, subject to the caveats contained within the statute - that security not be jeopardized and the introduction of new technology not be interfered with. Consumer choice can be facilitated by the competitive availability of devices from a variety

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of manufacturers and vendors through a number of different outlets. Competition, and not regulation, is the appropriate vehicle for assuring this consumer choice.

TIA offers a number of "Guiding Principles" for the Federal Communications Commission (FCC) to consider in implementing Section 629.

1. Operators must retain control over their networks; it is their investment at risk.
2. Operators must retain flexibility to deploy whatever equipment and security methods they see fit.
3. The regulatory model used for the telephone industry is not a proper analogy for this proceeding.
4. Industry developed standards are preferable to government-mandated standards.
5. Requests for waivers must be granted freely for both testing and initial rollouts of new equipment.
6. The Commission should avoid mandating any particular model for system security, including mandating the separation of security and non-security functions.
7. The law and sound policy forbid the compulsory licensing of technology and intellectual property.
8. The notion that there can be general portability of devices from system to system is simply impractical in today's rapid changing environment.

In view of the above principles, we recommend that the Commission focus on a right-to-attach rule which helps minimize unnecessary regulation, meets the Commission's responsibilities under the Act and provides a continued incentive for investment in new

technology in the marketplace. As an alternative to right to attach, TIA also discusses performance criteria which the Commission should consider.

II. Discussion

As the Commission has recognized in its Notice, it must be extremely careful in implementing the 1996 Telecom Act to avoid unintentionally stifling investment in and development of new technologies responsive to customers' needs in the changing market envisioned by that very Act. It is that very investment by manufacturers and service providers which drives the market momentum necessary to provide consumers with competitive products and services. Given the relative newness of the Act, Commission regulations should leave maximum opportunities and adequate time for service providers and manufacturers to assess the many new potential business opportunities created by this legislative overhaul.

In determining its appropriate role and responsibilities under the 1996 Act, TIA believes the Commission is equally obligated to adhere to the Administration initiative of minimal regulation. Therefore, in implementing Section 624 and 629 of the 1996 Telecom Act, the Commission should adopt only rules that are absolutely necessary. Specifically, TIA recommends the Commission adopt a straightforward "right-to-attach" rule, leaving to the marketplace the myriad of business decisions involving standards, system security and retailer/manufacturer/operator agreements inherent in implementing competitive availability.

In implementing this provision, the FCC should also support a diversity of solutions, not a "one-size-fits-all" regulatory policy. The deployment of digital services

and technologies is now at a crucial juncture and any overly broad government intervention in the marketplace could chill innovation.

III. The Law

TIA believes a careful reading of Sections 629 and 624 shows that while the Commission must consult with standard-setting organizations, it is not obligated under the legislation to set or require standards. In fact, Section 624 cautions against unintentionally impacting technology development through Commission involvement in standards.

The Notice correctly recognizes that the Commission “seek[s] not to develop standards ourselves, but to urge the adoption of voluntary standards.”¹ This position is fully consistent with the clear and repeated congressional policy that the Commission should not impose technical standards, but rather defer to the private, voluntary industry standards-setting process. Congress’ support for the open, consensus-based private standards process permeates the 1996 Act.²

For example, by requiring in amended Section 629 that the Commission satisfy cable compatibility through “narrow” technical standards that requires a “minimum” degree of common interoperability, Congress directly limited the Commission’s standard setting-authority in order to avoid stifling innovation and interfering in the development of open, industry-based standards. In addition, not only does the Conference Report on Section 629 specifically instruct the Commission to “consider the results of private

¹ See Notice at ¶ 66.

² Also see Notice and Request for Comments on Proposed Revision of OMB Circular No. A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,” 61 Fed. Reg. 68312 (December 27, 1996). The proposed revision to OMB

standard setting activities” such as the Institute of Electrical and Electronics Engineers (IEEE), Digital Audio Visual Council (DAVIC), Motion Picture Engineering Group (MPEG) and the American National Standards Institute (ANSI)³, but the Senate voted down this very provision expressly to preclude mandatory FCC standards. Finally, by authorizing the Commission to “participate” with “appropriate industry standard-setting organizations” in the development of interconnectivity standards, Congress wants this Commission to utilize an industry-based approach to technical standards in telecommunications.

Congress’ clear policy favoring private industry standards is intended to further the pro-competitive, open processes used by voluntary standards-setting organizations such as TIA and other ANSI-accredited bodies. TIA has played a major role in the development of consensus-based standards that are critical to the efficient functions of our nation’s telecommunications network, and believes that this fair and balanced approach to standards is far preferable to mandatory governmental standards, which frequently are neither flexible nor sufficiently open in their development to ensure a pro-competitive and pro-consumer outcome.

IV. Previous Marketplace Experience

Forbearance from regulation does not mean that the necessary degree of industry standardization and competitive availability of equipment will not occur. As an ANSI-accredited industry standard-setting organization, TIA is fully aware of the benefit which

Circular No. A-119 was to implement the National Technology Transfer and Advancement Act of 1995 (“NTTAA”), P.L. 104-113.

³ Conference report at page 181

standards can bring to the industry and to consumers. For example, industry developed standards for several varieties of Personal Communications Services (PCS) and cellular technologies have provided the basis for market momentum in providing PCS and cellular service to consumers.

While the Commission initially required adherence to the analog Advanced Mobile Phone Service (AMPS) cellular standard, no such U.S. regulatory requirement exists for second generation cellular standards such as Code Division Multiple Access (CDMA) and Time Division Multiple Access (TDMA), nor for CDMA, TDMA and Global System for Mobile Communications (GSM) and other standards being deployed by PCS licenses. Even without Commission intervention, PCS providers have chosen from these standards among the several that are available. PCS systems are being built out, subject to the availability of capital to fund spectrum auctions and implementation costs, but not limited by any lack of standards or associated technologies. In the not too distant future, handsets are expected to be available that accommodate both multiple technologies in a single chip.

TIA and its member manufacturers are also well aware that standards must be sufficiently flexible to incorporate rapid technology developments responsive to changing market requirements. For this reason, standards must have the proper balance of certainty and flexibility. A significant concern with standards imposed by regulations rather than by customer requirements is that the regulatory process is not always able to accommodate subsequent modifications in a timely manner.

Telephone-based modems are an area in which the market and not regulation have defined success by leaving room for innovation. Approximately 40% of America's homes now have computers and few businesses have survived without computerization. Many of

these computer users today connect to various networks and information sources through telephone-based modems.

The market for such modems is vibrant at the retail level with significant price competition. Yet, while the Commission adopted right to attach requirements, it never required an interoperability or portability standard for telephone line modems. Such standards exist, but they were driven by customer demand, not a regulatory requirement. In fact, this lack of a regulatory standard has allowed the industry to develop successively faster modems in response to consumer demand. Had the industry been required to adhere to a rule developed at the outset of a nascent telephone line modem industry, it is extremely doubtful that the regulations would have incorporated the range of future consumer requirements to come.

Notably, the retail telephone line modem market also developed without detailed Commission intervention. To TIA's knowledge, there are no Commission rules which: require retailers to make shelf space available; define the allowable or prohibited marketing arrangements among manufacturers, telephone companies and retailers; address what computer/modem products, software, and Internet service can or cannot be bundled; or restrict intellectual property rights of manufacturers. In short, a vibrant competitive market has developed based on consumer demand, aided only by a regulatory right-to-attach requirement.

V. Standards

TIA is a strong supporter of the private, voluntary industry standards-setting-process and has a long-standing-opposition to government action in this area. The TIA

and the Electronic Industries Association (EIA) issued a *White Paper on National Information Infrastructure* (NII) which concluded:

The variety of information appliances interconnected by one-way and two-way communications networks that define the NII must be functionally compatible with the networks and information resources to which they connect. This compatibility is best achieved by industry (which has the expertise) voluntarily developing interface and interoperability standards. Such standards serve the public interest by stimulating competition and allowing manufacturers, network and information providers to compete on the basis of innovation, quality and price. Industry standards also increase consumer confidence and provide assurances that a device will interoperate with a network, and will properly access, display or act upon information resources carried on the network...

We are leading proponents of voluntary technical standards... In areas of rapidly changing technology, premature adoption of a standard can impede innovation.

VI. The Realities of Today's Multichannel Video Programming Distributors (MVPD) Market

The 1996 Telecom Act has provided the basis for many potential new opportunities in providing services to the public. Traditional local exchange telephone providers may compete with cable providers to offer multichannel video programming and other services. Traditional cable operators may compete with local exchange providers to offer faster access to the Internet through upgraded two-way capable broadband cable infrastructure. Long-distance providers may offer local exchange service and local exchange carriers may offer long-distance service.

The 1996 Act creates a myriad of business investment opportunities, decisions and priorities which must be sorted out before the public sees significant competition. Such complex decisions involve all of these service providers and the manufacturers who supply equipment to those providers and/or consumers who use their networks.

At the same time, service providers and manufacturers have significant embedded investment in networks and technologies in use or already under development which the

Commission must not jeopardize. For example, there are tens of millions of analog set-top boxes and millions of other devices for the reception of voice, video and data services in the analog domain.

Separate from the provisions of the 1996 Act, cable operators face competition from digital broadcast satellite (DBS) providers and potentially from wireless multichannel multipoint distribution system (MMDS) and local multipoint distribution system (LMDS) broadband licensees. These competitive providers are free to make whatever arrangements they see fit with retailers, including bundling of product and service, unfettered by regulation. As a result, consumers have seen significant price competition in the provision of DBS products and service.

Any regulations adopted and the timing of their implementation must therefore allow adequate opportunity for investment decisions to be made based on both current and future market requirements and competition. If regulatory decisions jeopardize embedded investments, they will also negatively impact the availability of capital for upcoming and future development which is needed to bring to consumers the competition envisioned by the Telecommunications Act of 1996.

Recently, there have been a number of positive developments in the cable industry which should help ensure an open architecture for digital services. The cable network originated as a method of improving the quality and delivery of over-the-air broadcast signals and subsequently migrated toward a secure network to protect the intellectual property of its programmers. In this environment, there were few incentives and reasons for deploying an open architecture system, particularly since there was little need to

communicate between subscribers and systems. In fact, such a system would have made piracy easier and reduced the value of the cable network.

With the deployment of digital and interactive services which require communication between subscribers and systems, the cable industry is now poised to move towards a more open form of architecture. In October 1996, the cable industry agreed on key elements of a digital standard. This specification should allow set-top terminals and cable modems built by different manufacturers to operate on the same cable system. The specification will conform to MPEG-2 and Dolby Audio AC-3 and incorporate relevant portions of the Advanced Television Systems Committee specification for digital television transmission. The proposed system also conforms to the International Telecommunication Union (ITU) standards for QAM modulation and uses the DigiCipher® implementation of the Digital Encryption Standard (DES) encryption standard. Multiple conditional access and control systems are to be supported.⁴

Since adoption of these specifications, two of the major cable vendors, General Instrument and Scientific-Atlanta have both announced licensing and cross-licensing plans. General Instrument has announced specific licensing arrangements with Zenith, Hewlett-Packard and Pace. Scientific-Atlanta has licensed its technology to Pioneer and Toshiba. Both companies have announced plans for cross-licensing their technologies to each other. Most recently, the cable industry has announced a standard for data and cable modems. The FCC should take these events into consideration when implementing this provision, particularly since these actions were taken subsequent to passage of the Telecommunications Act of 1996. Unlike the situation in 1995 and early 1996, licensing

and voluntary industry standardization are now setting the stage for market forces to achieve the commercial availability of navigation devices Congress foresaw in Section 629.

The Notice refers to the telephone model as a good starting point for this proceeding. However, this is not an appropriate model to use for navigation devices and cable systems. The Notice does cite some of the differences between the telephone and cable models, but there are many other distinctions which are not mentioned. The telephone network interface is at baseband, while the cable interface is the radio frequency of over-the-air broadcast signals. The customer has a dedicated line back to the switch in the telephone network. In the cable network, most of the data is transmitted down stream and the customer's return path is not dedicated, making it more susceptible to signal leakage and ingress from other subscribers. Cable networks are broadband, while telephone networks are narrowband. There are numerous other differences in terms of intelligence, security and other features and functions.

VII. Potential Solutions

A. Right to Attach

The Notice recognizes the right to attach as the core prerequisite for consumers to have the opportunity to obtain equipment from retail outlets. TIA supports the concept of providing the consumer with the right to attach. The Commission addresses the technical issues involved in according such a right to consumers. With respect to signal ingress, TIA would oppose imposition of an inflexible, Part 68-type regime. Signal leakage is a

⁴ CableLabs press release of October 3, 1996, "Cable Industry Agrees on Key Elements of Digital Systems

major concern and we would support the use of Part 15 certification rules to address this issue.

TIA believes the Commission can best balance the objectives in implementing Sections 629 and 624 of the 1996 Act by specifying the end result and leaving implementation details to the market. In this regard, TIA recommends that the Commission, after sufficient advance notice, adopt a rule requiring an MVPD to allow subscribers to connect any *compatible* equipment, regardless of where it is leased or purchased.

B. Performance Rule

Another alternative would be for the Commission to promulgate a performance rule that requires compliance with Section 629, but without specifying how MVPDs or cable operators must satisfy the retail availability obligation. For instance, MVPDs could make their navigation devices available for consumer purchase from unaffiliated vendors by among other ways, (a) maintaining a proprietary security system, but selecting a set-top box vendor that licenses its technology to third-parties for manufacture of compatible equipment, (b) moving to digital scrambling and adopting an industry standard for set-top boxes, to which other vendors could design their products, {c} adopting an analog approach that separates security and non-security functionalities, or (d) publishing their network specifications in Request for Proposal (RFP) form so that unaffiliated manufacturers can produce navigation devices meeting their requirements.

The Commission need not and should not mandate any technical standards to achieve retail availability, because MVPDs can satisfy the obligations of Section 629

Specification.”

without adopting any “standard” – whether Commission or industry sponsored. Rather, as the Notice⁵ suggests, the Commission can enact a performance rule that requires the end result, leaving the options up to the cable system or other MVPD as to how it will achieve compliance. It is not necessary that the Commission require any such performance rule to include separation of security and non-security elements or navigation devices. On the other hand, it would be necessary for the Commission to carefully craft such a performance standard, so that a cable system or MVPD is not held legally responsible for the independent decisions of retailers as to whether they will stock and sell equipment compatible with the system’s requirements. If a cable system or other MVPD did not follow any of the steps outlined above, or fashion some other approach for eliminating obstacles to the commercial availability of its navigation devices, it would be in violation of the Commission’s rule. On the other hand, if the local retailer did not carry the MVPDs device, or if volume constraints made it unprofitable for multiple manufacturers to produce compatible products, such results are not within the control of the MVPD and should not be considered a violation of Section 629.

In short, TIA believes that given the market and standards-setting developments since Section 629 was first enacted, the Commission can achieve commercial availability without technical standards and without any detailed regulations. The Commission need only create a time-limited deadline for the elimination by MVPDs of all barriers to the manufacture and retail sale of compatible navigation devices, and leave it to the industry and the marketplace to determine the best, most cost-effective and consumer-friendly way of meeting this obligation.

⁵ See ¶ 73.

VIII. Analog vs. Digital

The TIA also believes that it is important for the Commission to recognize the distinction between analog and digital services. Analog technology and services have been available for a long time and it would be very difficult to retroactively impose a regulatory regime to apply to analog devices. Digital devices are just now being deployed and are more easily subject to commercial availability rules and regulations.

IX. Multichannel Video Programming Distribution Without Subsidies

In the Notice⁶, the Commission references the section of the 1996 Act which allows MVPDs to offer equipment to consumers for accessing multichannel video programming "...if the system operator's charges to consumers for such devices and equipment are separately stated and *not subsidized by charges for any such service.*"⁷ TIA supports the Commission's tentative conclusion that its existing equipment rate rules that are applicable only to certain cable systems properly address Section 629(a)'s subsidy and bundling restrictions.

Congress indicated and the Commission reaffirmed in its Notice that when an MVPD is not rate regulated, "such subsidy cannot be sustained and the prohibition on bundling is no longer necessary."⁸ Thus, neither the subsidy nor the bundling prohibition applies to DBS, C-Band, MMDS, SMATV, or any other MVPD that is not subject to rate regulation. Similarly, when a cable system becomes subject to effective competition under

⁶ See ¶ 37.

⁷ Notice at ¶ 37 (citing 47 U.S. C. 549(a)) (emphasis added).

⁸ 142 Cong. Rec. S700 (daily edition Feb. 1, 1996) (colloquy between Sens. Faircloth and Burns)

Section 623(l)(2) of the Communications Act, or when its rates are otherwise unregulated,⁹ these restrictions should be eliminated at that time.

The conclusion is also entirely consistent with sound public policy. First, for non-rate regulated MVPDs, competitive pressures preclude the operator from raising rates for services to subsidize lower equipment prices, because to do so would drive customers to competitors offering similar service packages.

Second, there are public benefits resulting from the “bundling” of equipment purchases with service contracts in competitive markets. The Commission notes, for example, that DBS service providers currently offer rebates on equipment.¹⁰ These rebates are typically offered if a consumer agrees to subscribe to the DBS service for a certain length of time.

This sort of program is attractive to consumers who want to avoid the large upfront cost of purchasing DBS equipment. Similar product/service packages are available for cellular phone service for the same reason. The pricing and bundling flexibility used by DBS and cellular providers have played a key role in increasing competition and associated consumer benefits in the video and wireless areas, respectively. There can be other benefits as well. For example, below-cost equipment pricing may help to overcome the reluctance (or “excess inertia”) of early adopters to embrace new technology. Moreover, once such new technology is deployed, the intrinsic value of the network (or the “positive network externalities”) is enhanced for all subscribers.

⁹ For example, when cable operators’ CPST rates are deregulated on March 31, 1999 pursuant to the 1996 Act, a complaint that alleges improper subsidization through higher CPST rates should be dismissed given Congress’ determination that at that point in time such rates will be deemed to be reasonable.

¹⁰ Notice at ¶ 43.

The Commission should encourage such pro-consumer service/equipment bundling in competitive markets. As the MVPD market develops, service providers should not be restricted in their ability to use creative marketing and sales approaches for their product offerings.

To summarize, the Commission is without authority or sound policy basis to apply the subsidy or bundling prohibition to MVPDs that are not rate regulated. With respect to rate regulated cable systems, the Commission's existing rate rules already complement the subsidy and bundling restrictions of Section 629(a) and thus no further Commission action is required. Finally, the Commission should take into account when promulgating any rules to implement this section the many public benefits which accrue from service providers' offer of discounted equipment.

X. Interoperability and Portability

While these two concepts are seemingly fairly simple, they are in fact complex when applied to the evolving digital marketplace. The recent standards in the cable industry for data and digital video should help facilitate portability and interoperability in that industry. However, while digital DBS equipment is generally regarded as portable, it is not interoperable - each DBS system requires different equipment. Most of the new MMDS or wireless cable systems are not portable or interoperable. Thus, efforts to standardize or make more uniform the definitions of portability and interoperability will probably be unfair to new entrants. Given the complexity of the digital environment, the marketplace should define these terms. The statute itself contains no requirement for either portability or interoperability.

XI. Security

The statute requires that the Commission not jeopardize the security of MVPDs in promulgating rules on commercial availability. As the experience with analog security has demonstrated, there is a high potential for theft and piracy in the multichannel video programming environment. Most of this piracy comes at the expense of American network operators, programmers and copyright holders. Thus, the Commission should be extremely careful not to open up new opportunities for theft. In particular, while digital technology is generally more secure, the importance of security breaches can be much greater where financial transactions are involved.

In addressing system security, the Commission should keep in mind that regulations requiring separation of security and other functions could inadvertently impact the design and cost of today's semiconductor technology and integrated circuits (ICs), which allows manufacturers to provide multiple functions on a given IC, saving cost and miniaturizing products. If the Commission requires separation of these functions, it could prevent manufacturers of navigation devices from taking advantage of current and future advances in semiconductor and integrated circuit technology. The result would be higher cost and less desirable features for the consumer.

XII. Entities Covered and Scope of Equipment

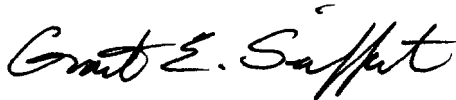
The Commission's Notice reflects the notion that any resolution of commercial availability will probably be a multiple-step-process. It would be premature to make many

conclusions about the entities covered and scope of equipment covered when digital technology and services are in their infancy.

XIII. Developmental Waivers

TIA believes that the Commission should give considerable flexibility to the provision which allows waivers for new services and equipment. The Commission should, as stated in the Notice, place a high value on technical and service innovation and waivers should be looked on sympathetically and expansively.

Respectfully submitted,

A handwritten signature in black ink, reading "Grant E. Seiffert". The signature is written in a cursive, flowing style.

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